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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,148	10/21/2005	Olivier Breguet	NITROS P174US	3255
20210 7590 10/24/2008 DAVIS BUJOLD & Daniels, P.L.L.C. 112 PLEASANT STREET CONCORD, NH 03301			EXAMINER EIDE, HEIDI MARIE	
			ART UNIT 3732	PAPER NUMBER
			MAIL DATE 10/24/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/554,148	BREGUET, OLIVIER	
	<b>Examiner</b>	<b>Art Unit</b>	
	Heidi M. Eide	3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 15-18, 20-26 and 28-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-18, 20-26 and 28-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 15-33 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Each of the independent claims have been amended to include the limitation "a transition couples the junction region to the end section and the axial length of the envelope is longer than an axial length of the transition." The originally filed specification does not contain support for a transition as claimed by the applicant. It appears from the drawing that that junction region is connected directly to the end region; it is not clear what the applicant is refereeing to as a transition since no support can be found in the specification.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 15, 18, 23-24 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Senia et al. 2002/0182565 (Senia).

5. Senia teaches a flexible dental instrument for use in drilling a root canal and the dental instrument being designed to be mechanically driven by an electric motor, the dental instrument being flexible and comprising an end section for mounting in a chuck driven by the electric motor, a proximal region adjacent to the end section, a central region extending from the proximal region and a distal region extending from the central region for guiding the instrument through the root canal terminating in a rounded tip and an envelope comprising the proximal region, the central region and the distal region and the envelope defining an axial length and having a generally inverted cone shape, with a widest portion of the envelop corresponding to the distal region and a smallest portion of the envelope corresponding to the proximal region wherein the dental instrument further comprises a junction region located between the proximal region and the end section, and the junction region comprises an area of the envelope has a minimum thickness which capable of breaking in the event that a predetermined drive torque is applied to the envelope during use of the dental instrument, and a transition couples the junction region to the end section and the axial length of the envelope is longer than an axial length of the transition (see Appendix for further explanation) as illustrated in fig. 1 par. 5). As to claim 23 Senia teaches the dental instrument wherein the predetermined drive torque is capable of corresponding to a torque at which the distal region of the dental instrument breaks. The claimed limitations are met since the structure taught by Senia is capable of functioning as claimed.

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6. Claims 17 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Senia et al. 2002/0182565 (Senia) as applied to claim 15 above, and further in view of Johnson 6,074,209.

7. Re claim 17, Senia teaches the widest vortex angle corresponding to the distal region, a smallest vortex angle corresponding to the proximal region, and one or more intermediate vortex angles corresponding to the central region. Senia does not teach the envelope consists of several juxtaposed sections extending axially from one another and each of the section having a different vortex angle. Johnson teaches the envelope consists of several juxtaposed sections extending axially from one another and each of the section having a different vortex angle as illustrated in figs. 3-4. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Senia in view of Johnson in order to reduce the risk of stalling or locking up during manipulation or rotation of the file as taught by Johnson (col. 2, l1.48-50).

8. Re claim 25, Senia does not teach the central region is polygonal and comprises hollowed flutes with sharp cutting edges that are generally helical. Johnson teaches the central region is polygonal and comprises hollowed flutes with sharp cutting edges that are generally helical as illustrated in fig. 6 (col. 4, ll. 2-6). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Senia in view of Johnson in order to shape and enlarge the canal by cutting away portions of the canal walls as taught by Johnson (col. 4, l1.9-11).

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9. Claims 20-22 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Senia et al. 2002/0182565 (Senia) as applied to claim 15 above, and further in view of Corneo CH 513, 640.

10. Re claim 20, Senia does not teach the dental instrument wherein the area of the envelope which is designed to break consists of a reduced section adjacent the proximal region of the envelope. Corneo teaches the partial break consists of a portion of reduced section as illustrated in fig. 2. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Senia in view of Corneo in order to use a tool to pull out the file once separated from the end section as taught by Corneo (par. 5, ll. 5-7).

11. Re claims 21 and 32, Senia does not teach the dental instrument wherein the area of the envelope which is designed to break consists of a modification in one or more of type and structure of material used for the instrument. Corneo teaches the dental instrument wherein the area of the envelope which is designed to break consists of a modification in the structure of material as illustrated in fig. 2. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Senia in view of Corneo in order to use a tool to pull out the file once separated from the end section as taught by Corneo (par. 5, ll. 5-7).

12. Re claim 22, Senia does not teach the dental instrument wherein the area of the envelope which is designed to break consists of at least one peripheral notch formed in the junction region. Corneo teaches the dental instrument wherein the area of the envelope which is designed to break consists of at least one peripheral notch formed in

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the junction region as illustrated in fig. 2. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Senia in view of Corneo in order to use a tool to pull out the file once separated from the end section as taught by Corneo (par. 5, ll. 5-7).

13. Claims 16, 26, 28 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Senia et al. 2002/0182565 (Senia) as applied to claim 15 above, and further in view of Berlin 5,876,202.

14. Re claim 26, Senia does not teach the central region is polygonal and comprises flutes that are generally helical with blunt edges. Barton teaches the central region is polygonal and comprises flutes with blunt edges (col. 4, l. 21) that are generally helical as illustrated in fig. 1. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Senia in view of Berlin in order to produce a non-cutting edge as taught by Berlin (col. 2, ll. 55-56).

15. Re claim 28, Senia does not teach the central region comprises helical section and rectilinear sections. Berlin teaches the central region comprises helical section and rectilinear sections as illustrated in fig. 4 (col. 4, ll. 27-28). As to claims 16 and 30, Senia teaches the invention as discussed above, however does not teach a vertex angle in constant along the entire axial length of the envelope. Berlin teaches a vertex angle in constant along the entire axial length of the envelope as illustrated in fig. 4. As to claim 31, Senia teaches the dental instrument wherein the predetermined drive torque is capable of corresponding to a torque at which the distal region of the dental instrument breaks. The claimed limitations are met since the structure taught by Senia

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is capable of functioning as claimed. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Senia in view of Berlin in order to reduce the screwing-in tendency of tool land thus avoiding blockages which are sources of tool breakage as taught by Berlin (col. 4, ll.32-34).

16. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Senia et al. 2002/0182565 (Senia) in view of Berlin 5,876,202 as applied to claim 30 above, and further in view of Corneo CH 513, 640.

17. Senia in view of Berlin does not teach the dental instrument the area which is designed to break comprises a modification of the structure. Corneo teaches the dental instrument wherein the area of the envelope which is designed to break consists of a modification in the structure of material as illustrated in fig. 2. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Senia in view of Berlin further in view of Corneo in order to use a tool to pull out the file once separated from the end section as taught by Corneo (par. 5, ll. 5-7).

### ***Response to Arguments***

18. Applicant's arguments with respect to claims 15-33 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heidi M. Eide whose telephone number is (571)270-3081. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**Heidi Bashaw**  
**Examiner**  
**Art Unit 3732**

**/John J Wilson/**  
**Primary Examiner**  
**Art Unit 3732**

/Heidi M Eide/  
Examiner, Art Unit 3732

10/15/2008

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Appendix I

